



THE MULTIMEDIA ARE EFFECTIVE RESOURCES FOR QUALITY SCIENCE EDUCATION

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ABSTRACT

The science education including the education in physics, chemistry, biology, geology and may be other practical based discipline like geography etc. The practical based studies are factorial and their study method is experimental methods in science education. To provide more effectiveness is science education, the multimedia may have an important role as study materials for teachers and learners. The multimedia is content that uses a combination of different content forms such as text, images, animations, videos and interactive content. Multimedia contrasts with media that use only rudimentary computer displays such as text only or traditional forms of printed or hand produced material. The multimedia may be used in theoretical and practical studies of science subjects in classrooms and laboratories. It creates the joyful, interesting and result orienting behavioural changes during teaching learning activities among students and teachers. This study, recommends the Texture matter of Science in the form of books, journals, hand-books, encyclopedia etc., and then prepare the audio-visual aids in the forms of charts, models, working models, photographs, movie, still images and animations related with the science to prove their effectiveness for improving the quality of science education.

KEYWORDS: Text, Audio, Video, still images and animation.

INTRODUCTION:

Multimedia is content that uses a combination of different content forms such as text, audio, images, and animations, "video and interactive content. Multimedia contrasts with media that use only rudimentary computer displays such as text-only or traditional forms of printed or hand-produced material.

Multimedia can be recorded and played, displayed, interacted with or accessed by information content processing devices, such as computerized and electronic devices but can also be part of a live performance. Multimedia devices are electronic media devices used to store and experience multimedia content. Multimedia is distinguished from mixed media in fine art, for example, by including audio it has a broader scope. In the early years of multimedia the term 'rich media' was synonymous with interactive multimedia, and 'hypermedia' was a application of multimedia.

Writing is a medium of human communication that represents language and emotion with signs and symbols. In most languages, writing is a complement to speech or spoken language. Writing is not a language, but a tool developed by human society. Within a language system, writing relies on many of the same structures as speech such as vocabulary, grammar, and semantics, with the added dependency of a system of signs or symbols. The result of writing is called text, and the recipient of text is called a reader. Motivations for writing include publication, storytelling, correspondence and diary. Writing has been instrumental in keeping history, maintaining culture, dissemination of knowledge through the media and the formation of legal systems.

A textbook or course book is a manual of instruction in any branch of study. Textbooks are produced according to the demands of educational institutions. Schoolbooks are textbooks and other books used in schools. Although most textbooks aren't only published in printed format, many are now available as online electronic books.

Sound recording and reproduction is an electrical, mechanical, electronic, or digital inscription and re-creation of sound waves, such as spoken voice, singing, instrumental music, or sound effects. The two main classes of sound recording technology are analog recording and digital recording. Prior to the development of sound recording, there were mechanical systems for encoding and reproducing instrumental music, such as wind-up music boxes and, later, player pianos.

Animation is the process of making the illusion of motion and the illusion of change by means of the rapid succession of sequential images that minimally differ from each other. The illusion—as in motion pictures in general—is thought to rely on the phi phenomenon and beta movement, but the exact causes are still unclear.

There are some forms of animation that do not feature a rapid succession of sequential images, but these are usually not considered "true" or "full" animation. For instance, the physical movement of image parts through simple mechanics in magic lantern slides and the movement of the projector (the magic lantern) in phantasmagoria provided popular moving picture shows.

Animation methods include traditional animation, and methods that use stop motion animation of two and three-dimensional objects, paper cutouts, puppets,

and clay figures. Images display in a rapid succession, usually 24, 25, 30, or 60 frames per second. Computer animation processes generating animated images with the general term computer-generated imagery (CGI). 3D animation uses computer graphics, while 2D animation is used for stylistic, low bandwidth and faster real-time renderings.

An image is an artifact that depicts visual perception, for example, a photo or a two-dimensional picture, that has a similar appearance to some subject usually a physical object or a person, thus providing a depiction of it.

Images may be two-dimensional, such as a photograph or screen display, or three-dimensional, such as a statue or hologram. They may be captured by optical devices—such as cameras, mirrors, lenses, telescopes, microscopes, etc. and natural objects and phenomena, such as the human eye or water.

The word 'image' is also used in the broader sense of any two-dimensional figure such as a map, a graph, a pie chart, or a painting. In this wider sense, images can also be rendered manually, such as by drawing, the art of painting, carving, rendered automatically by printing or computer graphics technology or developed by a combination of methods, especially in a pseudo-photograph.

Still or moving:

A still image is a single static image. This phrase is used in photography, visual media and the computer industry to emphasize that one is not talking about movies, or in very precise or pedantic technical writing such as a standard.

A moving image is typically a movie (film) or video, inducing digital video. It could also be an animated display such as a zoetrope.

A still frame is a still image derived from one frame of a moving one. In contrast, a film still is a photograph taken on the set of a movie or television program during production, used for promotional purposes.

Footage:

In film-making and video production, footage is raw, unedited material as originally filmed by a movie camera or recorded by a video camera, which typically must be edited to create a motion picture, video clip, television show or similar completed work.

Footage may also refer to sequences used in film and video editing, such as special effects and archive material (for special cases of this, see stock footage and B roll).

Since the term originates in film, footage is only used for recorded images, such as film stock, videotapes or digitized clips - on live television. the signals from video cameras are instead called sources.

Film footage:

Sometimes film projects will also sell or trade footage, usually second unit material not used in the final cut. For example, the end of the non-director's cut version of Blade Runner used landscape views that were originally shot for The Shining before the script was modified after shooting had finished.

Television footage:

Television footage, especially news footage, is often traded between television networks, but good footage usually commands a high price. The actual sum depends on duration, age, size of intended audience, duration of licensing and other factors.

Amateur video footage:

Amateur video footage of current events can also often fetch a high price on the market – scenes shot inside the World Trade Center during the September 11, 2001 attacks were reportedly sold for US \$ 45,000.

INTERACTIVITY:

Across the many fields concerned with interactivity including information science, computer science, human-computer interaction, communication, and industrial design, there is little agreement over the meaning of the term interactivity, although all are related to interaction with computers and other machines with a user -interface.

APPLICATIONS OF MULTIMEDIA:**Applications of the feature films/documentary films and animations:**

These resources are the most popular source for the entertainment of people. A large number of population of students is also affected by the multimedia, but hardly any focus is drawn toward the education, especially that of science through feature films/documentary films and animations. Following contents and teaching points can be developed from these resources :

S. No.	Contents	Teaching points
1	Human Behaviour	-
2	Ecological conditions of living things	1. Ecological conditions of animals 2. Ecological conditions of plants 3. Animal – plant relationships 4. Things around us
3	Living Regions of the World	1. The Mountains 2. The Grasslands 3. The Deserts 4. The Forests 5. The water resources 6. The Agricultural lands
4	The Farming of Economically valuable animals	1. Fish Farming 2. Poultry Farming 3. Pig Farming 4. Dairy Farming 5. Farming of silk Moth 6. Farming of Honey Bee
5	Protection of Plant life	-
6	Protection of Animal life	-
7	Programmes of Human Health and Care	-
8	Economic Importance of Plants	1. Timber 2. Medicine 3. Fuel 4. Fodder 5. Food 6. Fibre 7. Tannins, oils, etc. 8. Soil conservation

RECOMMENDATION:

This study recommends the contents of multimedia and end product of multimedia (feature films/documentary film/TV serials/Animations etc.) are not only effective resource for entertainment but also the sources of spreading of science Education in formal and non-formal education system. Various contents and teaching points may also be communicated in teaching-learning strategies in science class-rooms, laboratories and study in environment.

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- <https://en.wikipedia.org/wiki/Textbook>